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Research Article

Effects of Trait Anger and Anger Expression on Job Satisfaction and Burnout in Preceptor Nurses and Newly Graduated Nurses: A Dyadic Analysis

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Purpose: The preceptor–newly graduated nurse (NGN) relationship is integral to the successful experience of clinical teaching and learning and new nurses' transition. However, interpersonal conflicts between them are common. Little is known whether their anger contributes to their level of job satisfaction and burnout. This study aimed to examine the effects of each nurse's anger on job satisfaction and burnout in preceptor–NGN dyads.

Methods: A cross-sectional, correlational survey design was used. This study involved 121 preceptor –newly graduate nurse dyads in two hospitals in South Korea. Nurses completed a questionnaire about demographics, the State-Trait Anger Expression Inventory-Korean version, a job satisfaction measure, and the Copenhagen Burnout Inventory. This study adopted the Actor-Partner Interdependence Model to handle dyadic data.

Results: Preceptor nurses reported higher frequencies of feeling anger than did new nurses and appear to have higher levels of trait anger, anger-out, and burnout. Both the preceptors' and NGNs' trait anger was positively associated with preceptors' burnout. Suppressing anger was closely related to the nurses' own job satisfaction and burnout. Preceptors with a higher level of anger-control had higher job satisfaction, and NGNs with a higher level of anger-control had less burnout.

Conclusion: The results indicate that preceptors and new nurses appear to experience significant anger, which is closely associated with their job satisfaction and burnout during their preceptorship. Anger management training programs geared toward educating both preceptors and new nurses about appropriate anger expression in the workplace should be developed to retain valuable nurses.

Introduction

The retention of nurses and the training of newly graduated nurses (NGNs) have gained attention in the health-care setting as integral to providing quality care [1]. In this respect, preceptorship programs are viewed as an effective means of bridging gaps between knowledge and clinical practice, developing a sense of belonging, and lowering NGNs' turnover rates [2]. In preceptorship, preceptors and NGNs are the core elements, so appropriate programs are based on the close interaction between them [2,3].

The preceptorship model is widely applied to most hospitals to prepare NGNs for professional nursing during the stressful transition period after graduation [2–4]. Benefits of preceptorship for both new nurses and preceptors have been reported and would be guaranteed after successful completion of the preceptorship [4]. Preceptorship as part of an organized and systematic education helps to improve NGNs' competence, communication skills, job satisfaction, and, eventually, retention rate [4–6]. Preceptors can feel rewarded and satisfied with their professional experience [4]. Moreover, a positive relationship between preceptors and NGNs can affect NGNs' work readiness and provide a better learning experience [6].

However, preceptorship is a complex and dynamic process in the practice setting that can also include negative aspects [3,4]. A

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study conducted in South Korea found that many of preceptors (66.0%) and NGNs (44.7%) faced interpersonal conflicts since they met each other one-on-one as an educator and learner with different personalities, knowledge/experience, and expectations [7]. During preceptorship, some NGNs may experience unsupportive relationships with their preceptors and lose professional confidence because of preceptors' negative comments and scolding [4]. In addition, preceptors may feel pressure from the additional responsibilities of teaching NGNs while maintaining their clinical workloads, and they may also experience a lack of support from colleagues and love–hate relationships with the NGNs [4,8]. Such stressful preceptorship experiences can foster anger among preceptors and NGNs, and it may be expected that they are vulnerable to job dissatisfaction and burnout [8–10].

Anger is an emotional reaction to circumstances that are stressful or offensive to the person [10]. Anger is one of the emotions that nurses frequently experience [11,12]. Factors triggering anger include interpersonal conflicts associated with lack of communication, unfair treatment, and disrespect [10–12]. Another trigger of anger was nursing workload [13]. For example, a study of hospital nurses found that a heavy workload tended to lead to feelings of anger [13]. Even though preceptors and NGNs can be exposed to these various causes of anger, very few studies have been conducted to understand their anger.

Unresolved anger and expressing anger improperly may contribute to job dissatisfaction, burnout, and ultimately, turnover intention [12,14–16]. To date, limited studies have investigated the associations between anger and job satisfaction/burnout among nurses [15–18]. These studies have looked at anger among hospital nurses in general, not focusing on preceptors or NGNs. Nurses' job satisfaction was positively associated with controlling their anger but was negatively associated with exhibiting internalized and externalized anger [15,17]. In one study on emergency nurses [18] and another on psychiatric nurses [16], those who had higher trait anger and expressed anger overtly had higher levels of burnout, while those who could control anger had lower levels of burnout. In addition, nurses tend to use different emotion regulation strategies depending on hierarchical relationship; they dealt with their anger passively toward supervisors but coped with their anger actively toward NGNs or peers [17]. Similarly, ways to express anger and its impact would be different within the preceptor–NGN relationship. Thus, more studies are needed to examine the association between anger and job satisfaction/burnout in the preceptorship experience.

As components of work-related well-being, job satisfaction and burnout have been identified as strong predictors of intent to leave [14]. Interpersonal factors focusing on interactions and conflict between nurses have been significant contributors to job satisfaction and burnout along with intrapersonal and extrapersonal factors [19,20]. In particular, preceptors and NGNs unavoidably interact with one another through the one-to-one educational relationship [2,21], which resembles the so-called "mother–child" relationship. However, many studies of preceptorship programs have focused on job satisfaction/burnout for either preceptors or NGNs separately without considering the reciprocal influence and conflict between preceptors and NGNs [4,8].

Moreover, anger is a bidirectional and interpersonal emotion relevant to interpersonal conflict [10,11]. Anger is sometimes inappropriately expressed, leading to the creation of unpleasant working environments in the clinical setting, which preceptors and NGNs may seek to avoid [22]. In the preceptor–preceptee pairs, anger can have detrimental effects on the educator–learner relationship, the teaching and learning process, and satisfaction with the preceptorship program, and these preceptorship experiences may be followed by lack of job satisfaction and burnout of both preceptors and NGNs [5,9,10,23]. Furthermore, anger can be expressed toward the counterpart, directly or indirectly, in the form of verbal abuse and ignoring, and anger felt by preceptors and NGNs would mutually lead to burnout and job satisfaction [10,11,17,24]. Therefore, it is necessary to focus on anger and its interactive impact on job satisfaction and burnout in the context of nursing preceptorship.

This study adopts the Actor-Partner Independence Model (APIM), which has been applied to dyadic data to explain mutual influence within interpersonal relationships since 1996 (Figure 1) [25]. Prior studies have focused on such dyads as couples, parent–child, teacher–student, and supervisor–supervisee. Thus, this dyadic model allows exploration of interdependencies by measuring the associations between scores within the preceptor–NGN dyad. It helps to assess both the effect of a person's own variables on his/her own outcome variables (an intrapersonal or actor effect) and on the outcome variables of the partner (an interpersonal or partner effect). Because the presence of dyadic dependency of responses between preceptors and NGNs is expected, it is necessary to treat the dyad as a unit of analysis to reduce the bias due to ignoring the nonindependence [25].

Therefore, the purpose of this study was to examine and compare anger frequency and duration in preceptors and NGNs; to explore differences between trait anger, anger expression, job satisfaction, and burnout of preceptors and NGNs during preceptorship; and to determine how trait anger and anger expression in the preceptor–NGN relationship are related to job satisfaction and burnout.

Methods

Study design, sample, and settings

This study used a cross-sectional, correlational survey design. It was guided by the APIM to explore dyadic interdependence among preceptors and their NGNs [25]. Using convenience sampling, preceptor–NGN dyads were recruited from two university hospitals, each with more than 900 beds. These university hospitals had

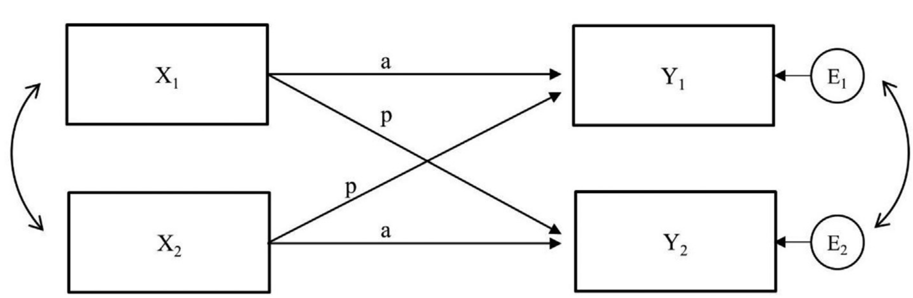

Figure 1. The Actor–Partner Interdependence Model (APIM). *Note*: a = actor effect; E = errors; p = partner effect; X and Y indicate measured variables.

preceptor training courses provided by the nursing departments and similar preceptorship programs. Inclusion criteria were as follows: Preceptors were invited to participate if they were experienced nurses who had completed a preceptor training program and had worked as preceptors; NGNs were included if they were working after completing a preceptorship; and a dyad of preceptor and NGN was in a one-on-one preceptorship. Sets of paired questionnaires having the same unique study identifiers were distributed to nursing units that had preceptors and NGNs who recently completed their preceptorship. The researcher explained the purpose of the study to potential participants. Participants who agreed to participate were instructed to complete the questionnaires in private and to seal the completed surveys in envelopes provided by the researcher. The required sample size was 120 dyads for conducting path analysis [26]. A total of 144 were approached, and 124 completed the survey. After excluding 3 uncompleted questionnaires, 121 dyads were used in the final analysis.

Ethical consideration

The study was approved by the institutional review board of Kyung Hee University [Approval no. KHSIRB-13-016(RA)], and permission to collect data was granted by each hospital. Before answering the questionnaire, participants were informed about the study, and informed consent was obtained from each participant by marking the “I agree” checkbox. Preceptors and NGNs independently completed a survey. Anonymity and confidentiality of the participants were assured. Because preceptors and NGNs may have been reluctant to answer sensitive topics, including anger experience in the workplace, obtaining a signature was waived on the consent document.

Measurements

The instruments used for this study were based on literature and adapted for this study. The self-reported questionnaire included information on each respondent's characteristics, anger frequency, and anger duration. Because path analysis uses observed variables, this study used reliable and valid measures for key variables that have been used in studies of nurses.

Trait anger

Trait anger was measured using the State-Trait Anger Expression Inventory-Korean version (STAXI-K) [27]. It is the tendency to experience anger as a personal trait [27]. The STAXI-K consists of 10 items, and in this study, items were rated on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Higher scores indicate a higher personal trait of easily feeling anger. The STAXI-K is a valid and reliable measure [27]. In this study, Cronbach alpha for preceptors and NGNs was .84 and .86, respectively.

Anger expression mode

The STAXI-K [27] was used to assess anger-in, anger-out, and anger-control. Anger-in is the extent to which a person suppresses anger; anger-out is the extent to which one expresses anger directed toward others in a poorly controlled manner; anger-control is the extent to which a person uses a restrained approach to anger [27]. This tool consists of 24 items rated on a 5-point Likert scale in this study (1 = strongly disagree; 5 = strongly agree). Higher scores indicate more frequent use of each mode of anger expression. A Cronbach alpha ranging from .75 to .76 was reported by Han et al. [11]. In this study, the Cronbach alpha was .74 (anger-in), .81 (anger-out), and .77 (anger-control) for preceptors and .83 (anger-in), .67 (anger-out), and .82 (anger-control) for NGNs.

Job satisfaction

Job satisfaction was assessed using the measure originally designed by Brayfield and Rothe [28]. This measure has five items, and a 5-point Likert scale was used to items in this study (1 = strongly disagree; 5 = strongly agree). Higher points indicate a higher job satisfaction. Reliability and validity were supported in Korean nurses [29]. In this study, the Cronbach alpha for preceptors and NGNs was .84 and .87, respectively.

Burnout

Burnout was assessed using the Copenhagen Burnout Inventory (CBI) developed by Kristensen et al. [30]. This 19-item tool, which uses a 5-point Likert scale (1 = never, 5 = always), contains three dimensions, including personal burnout, work-related burnout, and client-related burnout. Higher scores mean more intensive burnout. The reliability and validity of the CBI are supported [30]. In a previous study of nurses in Korea, the Cronbach alpha was .94 [31]. In this study, the Cronbach alpha was .94 for preceptors and NGNs. To ensure validity of the CBI for nurses in Korea, the authors assessed the content validity and pilot tested confirmatory factor analysis in the sample of nurses from this study.

Data analysis

Collected data were analyzed using SPSS, version 21.0, and AMOS, version 21.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to analyze the respondent's characteristics and variables, including anger traits, anger expression, job satisfaction, and burnout scores. Pearson correlations were conducted, and paired *t* tests were used to examine differences in the variables between preceptors and NGNs. A hypothetical model was developed based on the conceptual view of interdependent nature of close relationships from the APIM (Figure 2). Dyadic relationships between observed variables in preceptors and NGNs were estimated using path analysis. This analysis was adjusted for age of preceptors and NGNs. Goodness of fit in the model was assessed with the following indices: Chi-square (χ^2 or CMIN), the comparative fit index (CFI), the normed fit index (NFI), the Tucker–Lewis index (TLI), the goodness of fit index (GFI), the standardized root mean residual (SRMR), the root mean square error of approximation (RMSEA), and the Hoelter's critical N (CN).

Results

General characteristics of participants

Duration of the preceptorship program ranged from 3 to 9 weeks with a mean of 5.58 (±1.83) weeks. Preceptors' and NGNs' characteristics are presented in Table 1. Preceptors were, on average, 30.52 (±3.77) years old, and NGNs were 23.36 (±1.46) years old. Most were women and held a bachelor's degree. Table 1 shows that 69.4% of preceptors were single, as were 99.2% of NGNs. The average work experience of preceptors was 86.30 (±39.04) months. Their working units were as follows: 19.8% in a medical ward, 27.3% in a surgical ward, 23.1% in an intensive care unit, 11.6% in an operating room, and 18.2% in other units.

Anger-related characteristics of preceptors and NGNs

As shown in Table 2, 90.1% of preceptors and 54.5% of NGNs experienced anger. Regarding frequency of anger, 74.4% of preceptors and 31.4% of NGNs reported that they experienced anger either more than once a week or more than once a day. In addition, 80.2% of preceptors and 38.8% of NGNs answered that anger resolved within a day. On the other hand, 9.9% of preceptors and 15.7% of NGNs experienced unresolved anger for a few days or weeks.

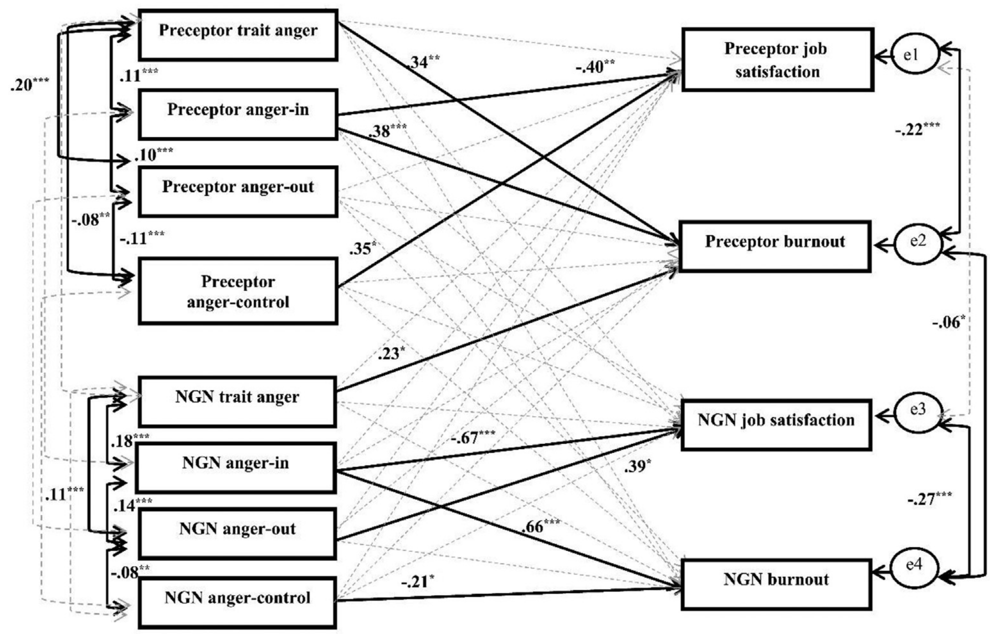

Figure 2. Path analysis diagram: Actor and partner effects of trait anger and anger expression modes on job satisfaction and burnout after controlling age.
Note: N = 121 dyads; NGN = newly graduated nurse; numbers are standardized coefficients; solid lines are for significant paths. *$p < .05$, **$p < .01$, ***$p < .001$.

Table 1 *General Characteristics of Participants (N = 121 dyads).*

Variables	Categories	Preceptors n (%) or M ± SD	NGNs n (%) or M ± SD
Age (yrs)		30.52 ± 3.77	23.36 ± 1.46
Gender	Men	2 (1.7)	6 (5.0)
	Women	119 (98.3)	115 (95.0)
Religion	Protestant	30 (24.8)	27 (22.3)
	Catholic	23 (19.0)	25 (20.7)
	Buddhist	12 (9.9)	6 (4.9)
	None/Others	56 (46.3)	63 (52.1)
Marital status	Single	84 (69.4)	120 (99.2)
	Married	37 (30.6)	1 (0.8)
Education level	3-year college	7 (5.8)	5 (4.1)
	4-year bachelor's degree	101 (83.5)	116 (95.9)
	Graduate school	13 (10.7)	0 (0.0)
Number of preceptee		3.18 ± 2.45	
Working experience (months)		86.30 ± 39.04	
Working unit	Medical unit	24 (19.8)	
	Surgery unit	33 (27.3)	
	ICU	28 (23.1)	
	OR	14 (11.6)	
	Others	22 (18.2)	

Note. ICU = intensive care unit; M = mean; NGN = newly graduated nurse; OR = operating room; SD = standard deviation.

Comparisons of trait anger, anger expression, burnout, and job satisfaction

Table 3 shows the differences in trait anger, anger expression types, burnout, and job satisfaction between preceptors and NGNs. Among anger expression types, both preceptors and NGNs showed a higher level of anger-control than anger-in and anger-out. Preceptors and NGNs significantly differed in trait anger, anger-out, anger-control, and burnout scores ($p < .05$). Preceptors reported higher levels of trait anger, anger-out, and burnout, but NGNs reported better anger-control. There was no significant difference in suppressed anger and job satisfaction between preceptors and NGNs. Moreover, significant correlations were observed between them, even though correlation coefficients represent small to medium effects. Preceptors' anger-in was correlated with NGNs' anger-in ($r = .25$, $p = .005$). There was a positive correlation between preceptors' and NGNs' job satisfaction ($r = .21$, $p = .019$). Preceptors' burnout had a positive correlation with NGNs' burnout ($r = .25$, $p = .006$).

Table 2 *Anger Frequency and Duration between Preceptors and NGNs (N = 121 dyads).*

Variables	Categories	Preceptors (n = 121) n (%)	NGNs (n = 121) n (%)
Frequency	More than once a day	36 (29.8)	11 (9.1)
	More than once a week	54 (44.6)	27 (22.3)
	More than once a month	15 (12.4)	23 (19.0)
	More than once 2-3 months	4 (3.3)	5 (4.1)
	None	12 (9.9)	55 (45.5)
Duration	Resolve within a day	97 (80.2)	47 (38.8)
	Within days and weeks	11 (9.1)	13 (10.7)
	Continued unresolved	1 (0.8)	6 (5.0)
	None	12 (9.9)	55 (45.5)

Note. NGN = newly graduated nurse.

Table 3 *Descriptives of Study Variables, Differences, and Correlation Coefficients between Preceptors and NGNs (N = 121 dyads).*

Variables	Preceptors (n = 121) M ± SD	NGNs (n = 121) M ± SD	t	p	r
Trait anger	22.95 ± 5.75	19.92 ± 5.67	4.13	<.001**	.08
Anger-in	16.54 ± 4.46	16.96 ± 5.36	−.65	.514	.25**
Anger-out	15.17 ± 4.21	12.31 ± 3.44	5.78	<.001**	.15
Anger-control	25.63 ± 4.16	26.93 ± 5.07	−2.19	.029*	.01
Job satisfaction	20.42 ± 4.44	20.05 ± 5.19	.60	.550	.21*
Burnout	58.84 ± 13.46	54.96 ± 14.67	2.15	.033*	.25**

*$p < .05$.
**$p < .01$
Note. M = mean; NGN = newly graduated nurse; SD = standard deviation.

Actor and partner effects of anger on job satisfaction and burnout

The fit of the model was satisfactory after controlling for age: $\chi^2 = 51.76$ (df = 36, $p = .043$), CMIN/df = 1.44, CMI = .97, NFI = .90, TLI = .89, GFI = .94, SRMR = .07, RMSEA = .06, Hoelter's CN (.05) = 119 (Figure 2). For trait anger, the actor effect of the preceptors' trait anger was the level of association between the preceptors' trait anger and their job satisfaction/burnout. The partner effect for the preceptors was the level of association between the NGNs' trait anger and the preceptors' job satisfaction/burnout. The preceptors' trait anger had an actor effect on their own burnout ($\beta = .34$, $p = .009$), but no actor effect on their own job satisfaction. NGNs' trait anger had a partner effect on the preceptors' burnout ($\beta = .23$, $p = .042$), but no partner effect on the preceptors' job satisfaction.

In a parallel fashion, the actor effect for the NGNs was the degree to which the NGNs' trait anger was related to the NGNs' job satisfaction/burnout. The partner effect for the NGNs was the degree to which the preceptors' trait anger was related to the NGNs' job satisfaction/burnout. The NGNs' trait anger did not have an actor effect on their own job satisfaction and burnout, and the preceptors' trait anger did not have a partner effect on the NGNs' job satisfaction and burnout.

In prediction of job satisfaction/burnout, there was only evidence of actor effects of the preceptors' and the NGNs' anger expression types. Preceptors reporting greater anger-in reported lower job satisfaction ($\beta = -.40$, $p = .002$) and higher burnout ($\beta = .38$, $p < .001$). Higher levels of anger-control among preceptors was related to better job satisfaction ($\beta = .35$, $p = .011$), while there was no association between anger-out and job satisfaction/burnout. Furthermore, the more the NGNs reported greater anger-in, the more they were likely to report lower job satisfaction ($\beta = -.67$, $p < .001$) and greater burnout ($\beta = .66$, $p < .001$). The more the NGNs reported anger-control, the more the NGNs were likely to report lower burnout ($\beta = -.21$, $p = .022$). The NGNs' anger-out was also related to the NGNs' job satisfaction ($\beta = .39$, $p = .049$).

Discussion

This study explored trait anger, anger expression types, job satisfaction, burnout, and their associations in preceptor–NGN dyads during preceptorship. A higher proportion of preceptors and NGNs experienced anger. It could be limiting to directly compare the results of previous studies with the results of this study because of individual differences and environmental factors, but both preceptors and NGNs in this study experienced anger at a higher rate compared with hospital nurses in another study (44.4%) [17]. In addition, results of bivariate correlations suggest some evidence of the interrelationship between preceptors and NGNs in anger, job satisfaction, and burnout in preceptorship context. However, the degree of correlation could be influenced by many factors, including other personal traits, length of preceptorship period, level of engagement, and preceptor–new nurse relationship quality [3,21,24]. Future research needs to explore more possible interrelationships while considering other characteristics in the preceptorship relationship.

Preceptors had significantly more trait anger and burnout than NGNs. Even though trait anger is considered a part of temperament, a previous study of nurses revealed that high trait anger was related to more workload [13]. During a certain period of preceptorship, preceptors seem to take on additional responsibilities without enough organizational recognition or reward [8]. Preceptors tend to be considered a protector and a role model for their NGNs [21]. They are expected to provide continuous support and guidance to their NGNs and to ensure that NGNs are adequately prepared for conducting nursing duties in real clinical settings [4]. At the same time, preceptors need to care for patients, and in turn, face increased stress from role conflict [4,8]. Hence, workload burden and multiple roles may bring about higher trait anger and exhaustion in preceptors than in NGNs.

With regard to anger expression types, preceptors used significantly more anger-out than NGNs, but NGNs reported more anger-control than preceptors. This finding is consistent with reports from previous studies of clinical nurses [15]. It is expected that preceptors and NGNs would perceive inherent power differential in the preceptor–NGN relationship because preceptors evaluate NGNs, and thus, they similarly manage anger as clinical nurses do.

As for the interpersonal relationship between preceptors and NGNs, only one partner effect related to preceptors' burnout was observed in this study. The tendency of both preceptors and NGNs to become angry seems to play an important role in preceptors' burnout. Researchers have found that the higher the trait anger employees have, the more the burnout they experience [18,32]. NGNs' anger can be manifested in passive-aggressive behaviors toward preceptors, resulting in preceptors' burnout [10]. Thus, dyadic strategies' aim to manage anger using each preceptor–NGN pair can be an effective approach to mitigating preceptors' burnout.

However, the trait anger of NGNs and preceptors was not related to NGNs' burnout. During preceptorship, the difference between perceived support between preceptors and NGNs can be a possible reason [18]. Further study is required to determine whether there is an interplay of other factors and NGNs' burnout during preceptorship. In addition, there was no association between trait anger and job satisfaction in preceptors and NGNs. This finding is consistent with a study that indicated that trait anger did not moderate the relationship between coworker interpersonal conflict and task performance [32]. Engin and Cam [33] also reported that there was no correlation between trait anger and job motivation.

When it comes to actor effects, our findings indicated that both preceptors and NGNs who reported more anger-in had significantly less job satisfaction and more burnout, which are similar to previous studies [12,16,33]. This could be due to the fact that concerns about the negative impact of expressing emotions made preceptors and NGNs suppress anger, leading to burnout and job dissatisfaction [18]. Therefore, it is necessary to develop a program for preceptors and NGNs considering anger expression types and how to resolve repressed anger.

Additional findings from the study were the associations between other modes of anger expression and outcomes. Preceptors' anger-control was positively related with their own job satisfaction. Yet, NGNs' anger-control in the study was associated with their burnout, not their job satisfaction. The findings were partially supported by the studies [15–17,33]. A possible explanation may be that other factors, including length of working experience and work environment, would influence the relationship between anger-control and job satisfaction [11]. Although preceptors had already become adjusted, NGNs from different units were inexperienced at the end of the preceptorship, which can bring about variability. As for anger-out, expressing anger outwardly was not related to burnout, which is consistent with another study [16]. NGNs' anger-out showed a positive association with NGNs' job satisfaction in the study, while preceptors' anger-out did not. For NGNs, expressing anger to regulate their anger actively could have affected their job satisfaction [17]. For preceptors, the result is inconsistent with the finding of a study that there was positive correlation between expressed anger and job satisfaction [16]. This finding likely stems from the fact that the preceptors' specific situation, including nursing organizational culture, can be more related to their job satisfaction [11]. This set of results seems to suggest different impacts of anger expression types in preceptors and NGNs. Nonetheless, because most previous studies did not focus on preceptors and NGNs, it would be not enough to explain these patterns depending on preceptors and NGNs. Thus, before reaching conclusions regarding this study, further investigations need to be conducted to explore the role of anger-out and anger-control on the outcomes in the preceptor–NGN relationship.

Several limitations in this study need to be considered when interpreting the findings. First, this study used a convenience sample of preceptor–NGN dyads of two hospitals in Seoul, South Korea. This sample might limit generalizing the results to other areas or to other hospital settings. Second, owing to the cross-sectional design of this study, causal interpretations of the findings need to be viewed with caution. In addition, preceptors and NGNs could have differences in the variables before and after the preceptorship. Further studies need to be conducted on the dyadic longitudinal interplay between anger and job satisfaction/burnout to have better insight into how the variables have changed and influenced each other before and after the preceptorship. Third, nurses' anger experiences, job satisfaction, and burnout were self-reported. The results may not fully cover their experiences because each dyad works in the same unit in which a nurse hierarchy exists. Fourth, the sample size is another limiting factor of this study because sample sizes above 150–200 can generally provide more sufficient power for path analysis. Even though age was controlled in the study, impact of anger experience and anger expression types on outcomes can differ depending on other possible confounders, including working environment and social context [22]. Thus, replicating the current findings and adding more relevant factors into the model require a larger sample size. Finally, even though this study focused on job satisfaction and burnout affecting turnover and anger induced by challenges among preceptors and NGNs, further studies should consider extending the model to include key extrapersonal factors, such as high workload.

To our knowledge, this research is the first study to evaluate the association between anger, job satisfaction, and burnout from the perspective of preceptor–NGN dyads. Despite limitations, the present study contributes to a better understanding of the impact of anger on job satisfaction and burnout to support preceptors and NGNs. Our research has important practical implications. First, mutual influence between trait anger and burnout was found in preceptor–NGN dyads. Trait anger and its relevant factors, including needs for support and workload, should be routinely assessed in preceptor–NGN dyads. Second, to enhance preceptors' and NGNs' job satisfaction and reduce burnout, avoiding suppressed anger and increasing their sense of control over feeling angry are necessary for preceptors and NGNs. It would be expected to integrate anger management content, including discussion and practice of skills for handling interpersonal conflict and coping with negative emotions, in NGNs' orientation program and preceptor training program. In addition, when developing modules for the intervention, consideration of different expression modes for each preceptor and NGN group would be essential.

Conclusion

Overall, the results of this study indicated that trait anger and anger expression modes of preceptors and NGNs were associated with their job satisfaction and burnout. Preceptors had greater levels of their own burnout, and NGNs' trait anger was also detrimental to their preceptors. Because their anger and interpersonal conflict can be triggered in stressful situations, especially in hospital settings, stronger, more thorough support systems for preceptor–NGN dyads are required to maintain positive preceptor–NGN relationships. In addition, addressing preceptors' and NGNs' anger in a positive way could enhance job satisfaction, reduce burnout, and ultimately decrease turnover.

Declaration of competing interest

The authors have declared no conflict of interest.

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